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THE FARMER AND THE RAILWAYS.*

HONORABLE SYDNEY ANDERSON.

It is rather a difficult matter within the limits of a brief talk to develop a sound consideration of a field which involves some fifty billion dollars in capital for transportation in all its forms and an annual expenditure for operation and maintenance which approximates ten billion dollars.

Certainly no industry is more vitally concerned with transportation efficiently performed at reasonable rates than farming. The farmer produced in 1921 14.7 per cent of all tonnage originated on the steam railroads of the United States, 29.1 per cent in the western district and in the southern district about 19.5 per cent. A considerable proportion of the farm products of the country as a whole are perishable and require for transportation special equipment, expedited services, and privileges of diversion. Another very large proportion of farm products are semi-perishable and also require a very high-grade equipment, equipment which must be in first-class order, and certain special privileges and services. Besides this, agricultural products are sold very largely upon exchanges in fluctuating markets and the lack of facilities, services, or congestion which delays service, frequently involves a considerable loss to the farmer. In addition, much of the farm products move by water. Farm products are produced in surplus quantities and sold abroad in all of the seven seas. The farmer is therefore as much interested in the merchant marine and its development as any industry in this country. His disadvantages from dependence upon foreign merchant marines are so obvious as to need no demonstration. On the other hand, the development of an American merchant marine frankly conducted in aid of American foreign commerce presents very great advantages.

I want, if I can, in the beginning to develop what seems to me to be a picture of the problem from the standpoint of agricultural production. The Mississippi Valley divides the United States into practically two economic worlds. The section west of the Mississippi River contains 69 per cent of the area of the United States. It has 47 per cent of the railroad mileage. It produces 54 per cent of the six principal grain crops and about 60 per cent of the cattle produced in the United States. It has only 27 per cent of the population and

* Read before the District of Columbia Farm Economic Association.

produces only 29 per cent of the total tonnage originated. In other words, 47 per cent of the railroad mileage of the United States is supported in 69 per cent of the area by 27 per cent of the population and by 29 per cent of the originated tonnage. At the other end of the problem in the part of the country east of the Mississippi River and north of the Ohio River, including Pennsylvania, Maryland, and the New England States, an area of $12\frac{1}{2}$ per cent of the United States, we have 70 per cent of the value of the manufactures produced in the United States, 47 per cent of the population, and 48 per cent of the tonnage originated. The problem, therefore, is not only a problem of transportation, but in a broader sense it is a problem of the distribution of population. If one third of the population in the northeastern area which I have described could be transported by some magic west of the Mississippi River, a very large proportion of the railroad problem of the country would promptly disappear.

There are some evidences that this transition of population from east to west is approaching, but it is obvious that no magic can transfer the population of New England and the Eastern States west of the Mississippi River, and, therefore, if we can not adjust the population of the country to transportation, we must of necessity adjust transportation to population. Speaking generally (perhaps this will be disputed by railroad people), I think it is sufficiently demonstrated that the price which the farmer receives represents the terminal price less transportation and handling charges, and these transportation and handling charges from the farmer's point of view are therefore a part of his cost of production.

Several studies have been made on the effect of distance from the market upon farm prices, but I shall not take the time to go into them at length. Among other studies that were made by the commission was one covering 9,476 cars of fruits and vegetables coming from various parts of the United States into eastern markets, including Chicago. This study took in all of the business of the firms in the commodities which were covered. The average haul on these groups was approximately 1,400 miles. The study was primarily made with the object of determining the relationship between freight cost and the price received by the original distributing receiver, but it also shows the effect upon the net price to the farmer of distance from the market. These figures show that the relationship of the freight cost to price received at the distributing terminal varies very widely even upon the same commodity. For example, the average freight upon 2,022 cars of barreled apples, produced principally in New

York, was 12 per cent of the price, whereas in the case of boxed apples, produced principally in Washington, the freight represented 36.23 per cent of the price received at the distributing terminal. This indicates, I think, very clearly, the disadvantage arising from distance from consuming markets.

If we take cabbage, we find that in the case of northern cabbage freight was 40.9 per cent of the price, in the case of southern cabbage 66 per cent, in the case of California cabbage 70 per cent, and in the case of Texas cabbage 75 per cent, again illustrating the disadvantage of the farmer in terms of freight costs who is at a long distance from the consuming market.

The farmer is not only interested in a reasonable rate, but he is interested also in a reasonable relationship between the rates upon different commodities. He can better afford, for example, to pay a high rate upon shoes than he can upon oats, upon clothes than upon wheat, or upon farm implements than upon live stock. The freight rate upon consumer's goods is paid but once, while the freight rate upon basic commodities, in which class agricultural products clearly fall, is frequently multiplied in the course of the manufacture and distribution of the product. As an example of what I mean, for instance, common lumber which costs \$12 per thousand at the mill in Oregon will take a freight rate into the consuming sections of the United States of approximately \$24 a car per thousand, so that if the retailer takes a margin or mark-up of 30 per cent it would represent a mark-up of \$3.60 on the lumber and \$7.20 on the freight.

I hope that we can have a better recognition of the economic effect of rates upon the distribution of commodities and a more discriminating application of rates as between commodities of high value and commodities of low value. Such relationships can not be maintained on the basis of horizontal increases or decreases in rates. Now, the value of commodities, I think this gathering of economists will very promptly recognize, is not always accurately expressed in terms of money. It is better expressed in terms of exchange—that is, in terms of the purchasing power of commodities in other commodities or in services. I have worked out a series of indexes which are intended to show the relationship of the prices of farm commodities to the price of transportation. From 1910 to 1916, inclusive, this relationship remained practically unchanged, but in 1916 the prices of farm products began to rise, while the price of transportation rose later and in much smaller degrees. As a result, compared with 1913, the farmer's dollar in commodities in 1916 would buy \$1.24 worth of

transportation, and in 1919 \$1.63 worth of transportation. From 1916 to 1920 transportation was the cheapest thing the farmer could buy. In January, 1920, the purchasing power of farm commodities in terms of freight rates may be expressed by the figure \$1.76. By April, 1921, the purchasing power of farm products in terms of transportation had dropped to 63 cents and by November had risen again to 72 cents. The purchasing power of prime steers in January, 1919, in terms of transportation, was \$1.78, and in June, 1921, 59 cents; hogs in January, 1919, \$1.68, and in June, 1921, 59 cents; and corn in January, 1919, \$1.69, and in June, 1921, 57 cents; and wheat in January, 1919, \$1.70, and in June, 1921, \$1.05. All of these figures are based on relationships of 1913. In other words, in terms of transportation the wheat farmer has been relatively better off than the farmer who raised either cattle, hogs, or corn.

Now, the question is, What is the answer? I think there are several answers, all of them more or less inter-related and dependent upon each other. The first answer, I think, is a consolidation of the railway systems of the country so as to permit the tonnage in territories having a greater traffic density to bear a larger proportion of the total cost of transportation as compared with the sections of the country having a lesser traffic density. As I pointed out in the picture which I tried very briefly to draw, you have the Mississippi Valley separating two distinct economic worlds, one of them agricultural in character, the other essentially industrial in character, and your problem is to move the agricultural commodities from this area west of the Mississippi River to the consuming centers in the north-eastern country at a rate which will permit the farmer to survive and to make something like a decent profit. At strategic points in the Mississippi Valley there are established great packing plants at which the cattle and hogs coming from the West are concentrated, processed, and sent on to the great consuming areas; here our great mills are located; here are the great grain terminals; here, again, the railroads divide into the railroads running east and the railroads running west. Without consolidation of these railroads, which will consolidate the East and the West into one economic world instead of into two, it is quite impossible to establish a basis of rates under which western agriculture can reach eastern markets at a profit equivalent to that which is ordinarily considered necessary for other industries.

The second answer it seems to me to be a more discriminating application of rates on the basis of the recognition in addition to the factors now considered in rate making—first, of the general economic

conditions and price levels existing in the country; second, of the price relations existing between different commodities; and, third, of the effect of rates upon the economic distribution of commodities. The cost of wages and material tends to rise with the prices of commodities, and if railroad rates do not rise in periods of rising prices, rising wages, and rising costs of material, the railroads will starve. On the other hand, if rates do not come down in periods of declining prices, the commerce of the country is partially strangled and the rates act as a drag upon the resumption of normal business activity. Now, it may be said that rates can not rise and fall with every fluctuation in prices and I am not suggesting anything of that kind. I do say that on the basis of a sufficient estimation of the economic facts it should have been possible, and it certainly would have been wise, to have raised rates in 1916 instead of in 1918, and to have lowered rates in 1920 instead of in 1921. In other words, rate changes should anticipate somewhat the economic conditions which are likely to exist in the future. If it is possible to make freight rates in general correspond with price levels, then it becomes possible for the railroads in times of prosperity to earn a reserve which will enable them in times of business depression and consequent low prices to participate in deflation with the rest of the country by rate reductions. Our complaint is not so much that rates are high, but that rates are high when prices of agricultural commodities are low.

There are three great regulators or controllers of the business activity of the country. These are taxes, interest rates, and freight rates. Taxes tend to absorb capital in non-productive enterprises which would otherwise be invested in productive enterprises, and to that extent to limit the increased development of the country which arises from the investment of capital in productive enterprises. In much the same way interest rates tend to regulate the volume of credit and money, and consequently to accelerate or retard the velocity of business as the rates are high or low. In much the same way freight rates tend to accelerate or retard the volume of business and to increase or decrease the radius of distribution of commodities. In periods of rising prices such as we had from 1916 to 1920 the average length of haul on the railroads tends to increase faster than the normal rate. For example, from 1911 to 1916, during which prices were practically stationary, the average haul increased 18 miles, or an average of 3 miles a year. From 1916 to 1920, when prices rose rapidly—more rapidly than freight rates—the average haul increased 42 miles, or 8.4 miles on the average for a year, whereas in 1920

during the period of business depression the average haul increased slightly less than two miles.

The one point I am trying to make here is that low freight rates in times of rising prices tend to do exactly the same thing that cheap money does—they tend to accelerate the rising prices and to force an uneconomic distribution of commodities. On the other hand, high rates in periods of low prices act as a drag upon business and tend to retard the normal business recovery of the country.

Freight rates can anticipate and currently correspond to general price levels and economic conditions as well as interest rates or discount rates anticipate and currently correspond to the volume of business and credit.

The fourth answer, it seems to me, lies in the working out of a more flexible and simple rate structure. If I correctly understand the rate structure of the country, it substantially contemplates a different rate from every point in the United States to every other point in the United States and frequently a number of different rates between two points in the United States. It is not so long since very much the same situation existed in the case of express rates, and it was protested very loudly that it was practically impossible to reduce those rates to a formula which the average human being could understand, and yet very promptly upon the passage of the parcels post act it became possible to reduce express rates to a relatively understandable formula.

Now, I appreciate the fact that simplification of the rate structure of the country is a task which involves an enormous amount of research and would probably take years, but I am firmly of the opinion that it is utterly impossible to establish transportation in this country on a basis which will adequately serve the commerce and industry of the country unless we can move conservatively and carefully in the direction of a more flexible and a more simple rate structure.

Transportation is essentially a public function, it creates no wealth in and of itself, although it tends to develop wealth. It is an aid to the development of the country and to commerce and the economic distribution of commodities. It ought to function as an aid to commerce rather than on the basis of carrying as much tonnage as possible as far as possible.

I am not nearly so much impressed with what we know about transportation and its relation to the economics of the country, and the relation of the various forms of transportation to each other, as I am with what we do not know. I think the first impression the man who investigates the transportation system gets is that while

there is a vast amount of information in regard to the operation of the railroads, the cost of railroads, and the physical valuation of railroads, there is very little information in regard to the economic relationship of transportation to the business, industry and agriculture of the country. We have in this country about 50 billion dollars invested in transportation—\$18,900,000,000 book value of steam roads alone. About four and one half billion dollars a year is spent in operating and maintaining the steam railways of the country. We have about two and one half billion invested in highways; about eight billion in automobiles; five billion in electric railways; some billions in canals, rivers, and harbors; more than two and a half billion in government shipping alone. Yet we have in this country no agency which is thinking in terms of the transportation of the country as a whole.

There has recently been made (and in referring to this matter I am doing so at the instance of Mr. Robinson, who was to have been here this afternoon, but who was obliged to go to New York) a proposal for the creation of a National Transportation Institute to promote fundamental research and education in transportation economics. It is contemplated that this institute will be supported by private contributions from the railroads of the country, and in a broader sense the shippers, industry, and agriculture; that its policies and determinations will be controlled by a board of governors composed of men eminent in their various fields and sufficiently disinterested to make their conclusions acceptable to the public as a whole. The purpose of such an institute would be primarily to study fundamental problems relating to the correlation of the transportation systems, the study of such questions as the terminal problem, which everybody talks glibly about, but which nobody knows what it is. Such problems, for instance, as the relationship between express and the parcel post and freight transportation. Such an institute would serve a very high purpose, would be an aid in the education of those who are engaged in transportation or in regulatory work, as well as the general public. We have hopes that this institute will be realized and in its realization we hope for the good wishes at least of all those who are interested in the economic relationship of transportation to agriculture, industry, and commerce.